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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/689,525

10/21/2003

Shuji Kurokawa

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03/08/2006

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WASHINGTON, DC 20036

EXAMINER

AKANBI, ISIAKA O

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/689,525	KUROKAWA, SHUJI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Isiaka O. Akanbi	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>30 June 2004</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statement file 01 September 2004 and 30 June 2004 has been entered and references considered by the examiner.

### ***Drawings***

The examiner approves the drawings filed 21 October 2003.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 2 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to which receiving member/element is formed using material having "translucency".

Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to which receiving member is "glass-like scatterer" and as to how "a receiving member of glass-like scatterer" perform the function of the invention.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Aoyama et al. (5,194,743).

As regard to claim 1, Aoyama discloses an alignment apparatus for aligning the central position and an orientation mark of a generally plate-like work with a predetermined position, comprising of the following:

a table (32)(fig. 4), which is provided rotatably in a plane and equipped with a loading plane having suction holes for said work, a shift mechanism (36) for shifting the table, and a sensor (38), which is disposed adjacent to the outer edge portion of said work, for detecting the position of the outer edge and outputting detected positional data for shifting said table to a predetermined position, wherein said loading plane is formed into a size so as to be positioned inside the periphery of said work (fig. 1), a receiving member (18) is provided outside said table and is positioned on the generally same plane as said loading plane and the periphery of the receiving member has a plane configuration so as to come to a position further outside the periphery of the work (fig. 1)(col. 3, line 49-65).

As to claim 2, according to claim 1, Aoyama discloses wherein said sensor (38) includes a light receiving element and a light emitting element (44) disposed so as to optically sandwich the periphery portion of the work, and said receiving member (32) is formed using material having translucency (fig. 1)(col. 3, line 49-61).

As to claim 3, Aoyama discloses wherein said light emitting element comprises a receiving member of glass-like scatterer, and is formed so as to reflect and project the light by allowing the light to enter the receiving member laterally (fig. 1).

As to claim 6, Aoyama discloses wherein said work comprising an ultra thin semiconductor wafer (col. 1, line 10-15).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama et al. (5,194,743).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over of Aoyama, as applied to claim 1, 2 or 3. The reference of Aoyama teaches of the features of claim 4, comprising transport mechanism for moving the wafer (col. 4, line 12-38), however the reference of Aoyama is silent regarding the receiving member is detachably attached around the periphery of the table/wafer because there is no reason for the receiving member to be detachably attached around the periphery of the table/wafer since the transport mechanism preserves the alignment. It would have been obvious to one having ordinary skill in the art at the time of invention to provide a receiving member that is detachably attached around the periphery of the table/wafer since these would not change/affect the function of the system for accurate alignment.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama et al. (5,194,743) in view of Yamauchi et al. (6,825,915 B2).

As regard to claim 5, the reference of Aoyama teaches of the features of claim 5, comprising a table (32)(fig. 4), which is provided rotatably in a plane and equipped with a loading plane having suction holes for said work, a shift mechanism for shifting the table (36), and a sensor (38), which is disposed adjacent to the outer edge portion of said work (18), for detecting the position of the outer edge and outputting detected positional data for shifting said table (32) to a predetermined position, however the reference of Aoyama is silent regarding said table is formed out of material having translucency, and is formed into a size so that the periphery edge thereof comes to a position further outside the periphery of said work. The reference of

Art Unit: 2877

Yamauchi discloses a table (16) is formed out of material having translucency, and is formed into a size so that the periphery edge thereof comes to a position further outside the periphery of said work (fig.1)(col. 6, line 28-55). Therefore it would have been obvious to one having ordinary skill in the art at the time of invention to incorporate the teachings of Park in conjunction with Yamauchi to provide a table that is formed out of material having translucency, and that is formed into a size so that the periphery edge thereof comes to a position further outside the periphery of said work for the purpose of allowing the lights from the emitter to reach the receiver which cooperate to determine the location of the wafer edge.

### **Additional Prior Art**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references listed in the attached form PTO-892 teach of other prior art alignment apparatus for aligning the central position and an orientation mark of a generally plate-like work with a predetermined position that may anticipate or obviate the claims of the applicant's invention.

### **Conclusion**

### **Fax/Telephone Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isiaka Akanbi whose telephone number is (571) 272-8658. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2877

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Isiaka Akanbi

February 28, 2006



**HWA (ANDREW) LEE**  
**PRIMARY EXAMINER**



**Gregory J. Toatley, Jr.**  
**Supervisory Patent Examiner**

3/14/06